GEOG/ENVI-258

FYC: GEOGRAPHY OF ENVIRONMENTAL HAZARDS

Fall 2019
MWF 10:50-11:50 am, Carnegie 105

Course Description and Objectives:
The study of environmental hazards stands at a key point of intersection between the natural and social sciences. Geography, with its focus on human-environment interactions, provides key analytical tools for understanding the complex causes and uneven impacts of hazards around the world. We will explore the geophysical nature and social dimensions of disasters caused by floods, droughts, earthquakes, volcanoes, tsunamis, tornadoes, hurricanes, and wildfires. For each of these hazard types, we apply theoretical concepts from major hazards research paradigms, including quantifying the human and economic impacts of disaster; assessing, managing, and mitigating risk; and reducing the impacts of disaster, not only through engineering works but also by reducing social vulnerability and enhancing adaptive capacity. Looking into the future, we will discuss how global-scale processes, such as climate change and globalization, might affect the frequency, intensity, and geographical distribution of environmental hazards in the decades to come. Since this is a first-year course, we will also emphasize developing your skills in written and oral communication, scholarly research, and information literacy.

Required Readings:
Books:

All other readings for this course will be available electronically, via Moodle.

Course Policies:

1. Attendance and Participation. In this class, 25 percent of your grade derives from attendance and participation. Consistent attendance is necessary to fully comprehend the course material, and there will be plenty of opportunities to participate in this class. In general, "participation" means speaking up, sharing your thoughts, and making yourself noticed in positive, productive, and supportive ways. It also means listening carefully and respectfully to your fellow students. In this FYC, there may be minor assignments and tasks that will also be included within your participation grade, as detailed below in "course requirements."

2. Late work. You must turn in your work on time. I will indicate due dates for every assignment, and you must respect them. I will penalize you 10 percent of your grade (or a full letter grade) for a given
assignment for every day that it is late. If there are extenuating circumstances (e.g. illness, accident, bereavement, etc.) and you contact me before the due date, I will consider granting an extension.

3. **Turning in written work.** Unless I specify otherwise, I will be using electronic submission for assignments and exams. Specifically, for each assignment or exam, I will create a "dropbox" on Moodle that has a specific time that work is due (and the dropbox then "closes"). Please do **not** submit assignments via email or as "shared" documents in Google Docs.

4. **Reaction papers on campus events.** As mentioned above, you can improve your attendance and participation grade by attending campus events and turning in reaction papers about them. In addition to events that might be noted on the syllabus, I will notify you when I think there are things happening on campus that are relevant to our class. The reaction papers should be 1-2 pages long, and include a summary and critique of the lecture, film showing, or whatever the event may be. I am interested in a clear summary and a thoughtful critique, ideally one that connects the event to course themes. Please turn in these papers in a Moodle dropbox I will create specifically for this purpose, within a week after the event takes place. As a general rule of thumb, satisfactorily completing four of these reaction papers during the semester would raise your course participation grade by one letter grade (e.g. from a C to a B).

5. **Academic integrity.** As in every course, you will be expected to follow the college's policies on academic honesty: specifically, "Students are expected to maintain the highest standards of honesty in their college work. Forgery, cheating and plagiarism are serious offenses and students found guilty of any form of academic dishonesty are subject to disciplinary action." For more details, see the college's guidelines on Academic Integrity at [http://www.macalester.edu/academicprograms/academicpolicies/academicintegrity/](http://www.macalester.edu/academicprograms/academicpolicies/academicintegrity/).

6. **Special accommodations.** If you have a physical or learning disability that will require special accommodations, please contact me to discuss arrangements. All conversations will be confidential. You will also need to meet with a representative from Disability Services, which determines accommodations. They can be contacted here: [disabilityservices@macalester.edu](mailto:disabilityservices@macalester.edu).

7. **Communication.** You are welcome to come see me during my scheduled office hours. If you can't meet during those times, please send me an email or call my office and we'll schedule an appointment. In general, I answer emails within 24 hours. But I always prefer to discuss important matters in person, not electronically or by phone. Also, make sure that you check your email frequently, because I do send email messages – either from my own email address or via Moodle – frequently to the class.

8. **Use of Electronic Devices in Class.** Laptops are permitted in class but only for note-taking and for activities in class when specifically indicated. When we are having a lecture, discussion, student project presentation, or similar activity, I expect everyone's eyes and attention to be focused on that activity. You definitely should not be browsing the web, checking email, doing your homework, and so on during these class activities. The use of cell phones is strictly prohibited: no calling, texting or other uses of your cell phone during class time.
Class Format:
In this course there will be a mix of lecture- and discussion-based meetings. Generally speaking, there will be one or two lectures to introduce a new topic, and then a day for discussion to review important concepts and discuss readings in further depth. Typically these discussions will happen on a Friday, and these will also be the days we work on building scholarly skills in workshop format. This will be the general rhythm of the course. However, my lectures are meant to be interactive and not a one-way monologue, so feel free to ask questions, and expect that I will ask you questions, too.

Course Assignments:
- **Attendance and Participation:** see above.
- **Writing Portfolio.** Most of your grade in this course will come from a writing portfolio you will work on throughout the semester. There are several motivations behind using the portfolio format. First, writing-intensive FYCs require 20-25 pages of work in revision. Second, the portfolio format is meant to encourage you to make writing and revision a habit, something you do almost continuously throughout the semester, since the best way to improve your writing is through constant practice. Third, the portfolio format means that most of your grade comes from your best work at the end of the term, which incorporates all the lessons you’ve learned throughout the semester. These essays will be generally short (around 350-500 words). First drafts of essays will be due at specific times, and you will be graded on these drafts. However, the total of all first drafts will be worth just one-quarter of your course grade, while the final portfolio will be worth half of your course grade. There will also be a partial version of the portfolio due at mid-semester, so you can receive additional feedback. Throughout the semester, you will receive intensive writing instruction and feedback from Prof. Carter and Anjali, the class writing assistant.

Grading:

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<th>Component</th>
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<tr>
<td>Attendance and Participation</td>
<td>25%</td>
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<td>Writing Portfolio – all first drafts</td>
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<td>Final Portfolio</td>
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<td><strong>TOTAL</strong></td>
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Any assignments or activities that don’t go specifically into the writing portfolio will be counted as part of your attendance and participation grade.

**DETAILED COURSE SCHEDULE:**

Notes: "REQ"="Required"; "RCM"="Recommended"; schedule subject to change (with fair warning).

**How to read They Say, I Say:** keep up with the chapters of TSIS as assigned in the syllabus. Be sure to do the short exercises at the end of each chapter. These usually involve a close reading of a sample text, a re-reading of one of your own pieces of writing, and sometimes, a short assignment to write something new. I trust you to do these; your writing—and just as importantly, how you diagnose problems in your own writing—is going to improve (trust me). Frequently we will discuss TSIS in class, as part of our scholarly skills workshops.

**WEEK 1**

Sept. 4 (Wed.) Introduction; Course Business; Meaning of Liberal Arts Education
Sept. 6 (Fri.) Paradigms of Hazards Research
REQ: SMITH, chapter 1
REQ: They Say, I Say, Preface and Introduction

WEEK 2

Sept. 9 (Mon.) Dimensions of Disaster
REQ: SMITH, chapter 2

Sept. 11 (Wed.) Risk Assessment and Management
REQ: SMITH, chapter 4

Sept. 12 (Thurs.)
Assignment 1 DUE. Argument backed with quantitative data and analysis. Use the EM-DAT/CRED database to make an argument about disaster trends. (350-500 words)

Sept. 13 (Fri.) Reducing the Impacts of Disaster and Theories of Vulnerability
REQ: SMITH, chapters 3 and 5
REQ: They Say, I Say, Chapter 1

WEEK 3

Sept. 16 (Mon.) Hydrological Hazards: Flooding
REQ: SMITH, ch. 11

Sept. 17 (Tues.)
Assignment 2 DUE. Making a decision, using an analytical framework and backed with quantitative data. Use a risk analysis to decide whether to hold an outdoor concert given certain probabilities of extreme weather events. (350-500 words)

Sept. 18 (Wed.) U.S. Flood Policy and Management

Sept. 20 (Fri.) Flooding and Flood Control in the Upper Midwest
Activities TBA
REQ: They Say, I Say, Chapter 2
Sept. 21 (Saturday). FIELD TRIP ON LOCAL ENVIRONMENTAL HAZARDS!  
Details TBA

WEEK 4

Sept. 23 (Mon.) Climate Change and Coastal Flooding  
Global Environmental Change 16: 1-3.  

Sept. 25 (Wed.) US Flood Policy Stakeholder Debate Activity  
Prepare for in-class debate on U.S. flood policy (stakeholder-oriented debate)

Sept. 27 (Friday) US Flood Policy Stakeholder Debate Activity  
In-class debate on U.S. flood policy (stakeholder-oriented debate)  
REQ: They Say, I Say, Chapter 3

WEEK 5

Sept. 30 (Mon.) Mass-Movement Hazards  
REQ: SMITH, ch. 8

Oct. 1 (Tues.)  
Assignment 3 DUE. Argumentative essay with a research component. Op-ed piece to advocate for reform to US flood policy. (750-1000 words)

Oct. 2 (Wed.) Mass-Movement Hazards (cont’d)  
Case study on Oso, Washington landslide (related reading packet on Moodle)

Oct. 4 (Fri.) Library day  
Required library meeting (on research strategies). Meeting place TBA (in College Library)  
REQ: They Say, I Say, Chapters 4-5

WEEK 6

Oct. 7 (Mon.) Tectonic Hazards: Earthquakes  
REQ: SMITH, ch. 6  
Watch Video: "NOVA: Deadliest Earthquakes" (2012)

Oct. 8 (Tues.)  
Assignment 4 DUE. Use an analytical framework and scientific evidence to assign responsibility for a disaster. A post-mortem analysis of the Oso, Washington landslide. (350-500 words)

Oct. 9 (Wed.) Earthquakes: Haiti Case Study  
Reading Packet on 2010 Haiti Earthquake

Oct. 11 (Fri.) Discussion/Scholarly Skills Workshop  
REQ: They Say, I Say, Chapter 6
WEEK 7

Oct. 14 (Mon.) 2011 Japanese Earthquake, Tsunami, and Nuclear Accident
REQ: SMITH, ch. 6 (review section on tsunamis) and ch. 13 (review)
Watch Video: "PBS Frontline: Inside Japan's Nuclear Meltdown" (2012)

Oct. 15 (Tues.)
Assignment 5 DUE. Apply a hazards paradigm to explain the causes of a disaster, the 2010 Haiti earthquake. (350-500 words)

Oct. 16 (Wed.) Discussion of Japan’s 2011 Disasters

Oct. 18 (Fri.) Discussion/Scholarly Skills Workshop
REQ: They Say, I Say, Chapter 7

WEEK 8

Oct. 21 (Mon.) Volcanoes
REQ: SMITH, ch. 7

Oct. 22 (Tues.)
Assignment 6 DUE. Write a critical review of a documentary film: "PBS Frontline: Inside Japan's Nuclear Meltdown." (350-500 words)

Oct. 23 (Wed.) NO CLASS
Begin work on your mid-semester portfolio.
REQ: They Say, I Say, Chapter 8-9

Oct. 25 (Fri.) NO CLASS – FALL BREAK

WEEK 9

Oct. 28 (Mon.) Global Climate Change, Variability, and Extreme Events
REQ: SMITH, ch. 14
Research project assignment will be available

Oct. 30 (Wed.) Tornadoes
REQ: SMITH, ch. 9

**Nov. 1 (Fri.) Discussion/Scholarly Skills Workshop**
REQ: *They Say, I Say*, Chapter 10

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**WEEK 10**

**Nov. 4 (Mon.) Drought, Famine, and Hunger**
REQ: SMITH, ch. 12

**Nov. 5 (Tues.)**
Mid-Semester Portfolio DUE (will count towards your participation grade; qualitative feedback)

**Nov. 6 (Wed.) Political Ecology of Agriculture in African Dryland Environments**
GUEST LECTURE by William Moseley, Geography Department

**Nov. 8 (Fri.) Discussion on Drought, Famine, and Hunger**
Also: Visit from Dan Trudeau, Geography Department
REQ: *They Say, I Say*, Chapter 11

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**WEEK 11**

**Nov. 11 (Mon.) Wildfires and Climate Change**
REQ: SMITH, ch. 10 (section on wildfires)
RCM: *Fourth National Climate Assessment* (US), esp. chapter 6 on Forests.

**Nov. 12 (Tues.)**
Assignment 7 DUE. Identify a research topic. (100 words or fewer)

**Nov. 13 (Wed.) California wildfires case study**
Other readings on California wildfires TBA

**Nov. 15 (Fri.) Discussion/Scholarly Skills Workshop**
REQ: *They Say, I Say*, Chapter 12

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**WEEK 12**

**Nov. 18 (Mon.) Tropical Cyclones**
REQ: SMITH, ch. 9 (review section on hurricanes)
Nov. 19 (Tues.)
Assignment 8 DUE. Evaluate the evidence for causes of a trend: Is climate change leading to more frequent wildfires? (350-500 words)

Nov. 20 (Wed.) Hurricane Katrina case study
Other readings TBA

Nov. 22 (Fri.) Hurricane Maria in Puerto Rico case study
Activities and readings TBA
REQ: They Say, I Say, Chapter 13-14

WEEK 13

Nov. 25 (Mon.) Hurricanes wrap-up
Activities and readings TBA

Nov. 26 (Tues.)
Assignment 9 DUE. Articulate a research question and justify its significance, i.e. a very brief research proposal (250 words or fewer)

Nov. 27 (Wed.) and Nov. 29 (Fri.) NO CLASS—THANKSGIVING BREAK

WEEK 14

Dec. 2 (Mon.) Writing Workshop

Dec. 4 (Wed.) Writing Workshop

Dec. 6 (Fri.) Student Oral Presentations

WEEK 15 / FINALS

Dec. 9 (Mon.) Student Oral Presentations

Dec. 10 (Tues.)
Assignment 10 DUE. Write a research proposal with a short literature review based on scholarly research. (750-1000 words) This will be the subject of your oral presentations at the end of the semester, as well.

Dec. 11 (Wed.) Student Oral Presentations

Dec. 17 (Tues.) FINAL PORTFOLIO DUE
### COURSE SCHEDULE AT-A-GLANCE

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<td>2 (SEPTEMBER) LABOR DAY</td>
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<td>4 Introduction Course Business Meaning of a Liberal Education</td>
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<td>6 Hazards Paradigms</td>
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<td>11 Risk Assessment</td>
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<td>27 Stakeholder Debate on US Flood Policy</td>
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<td>30 Mass-Movement Hazards</td>
<td>1 (OCTOBER) Assignment 3 Due</td>
<td>2 Mass-Movement Hazards (Oso Landslide Case Study)</td>
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<td>21 Volcanoes</td>
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<td>Week</td>
<td>28 GCC, Variability and Extreme Events</td>
<td>29 Tornadoes</td>
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Weeks: 9-15

Dates: September 9 - December 13

Note: Thanksgiving Break occurs on November 28-29.